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BEFORE THE BOARD OF APPEALS

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In re Application of: Ole K. Nilssen
Entitled: TRACK LIGHTING SYSTEM
FOR 277 VOLT POWER LINE
Serial Number: 06/889,746
Filing Date: 07/28/86
Art Unit: 266
Examiner: DAVID K. MOORE

I, OLE K. NILSSEN, HEREWITHE
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IS: 8-28-88

REPLY BRIEF

Commissioner of Patents and Trademarks
Washington, D.C. 20231

In response to Examiner's Answer to Applicant's previously submitted Appeal Brief, Applicant provides a Reply Brief in the form of the following comments and arguments.

AUTHORITIES

The authorities to be relied upon in this Reply Brief are:

(1) Natural Law (i.e., the Laws of Nature): verifiable reality, facts, truths, the Laws of Physics, the Laws of Mathematics/Reason/Logic, etc.;

(2) Common Law: esp. definitions/usage of words/language;

(3) Statutory Law: esp. paragraph 103 of the Patent Law;

(4) Case Law: esp. recent decisions by the CAFC.

Natural Law preceeds and is superior to both Common Law and Statutory Law. Case Law is inferior to both Common Law and Statutory Law, as well as to Natural Law.

Thus, Statutory Law and Common Law are valid only as long as they do not conflict with Natural Law (i.e., facts, logic); and Case Law is valid only as long as it does not conflict with Natural Law, Common Law (i.e., ordinary usage/meanings of the English language) and/or Statutory Law.

REMARKS

In re Procedure and All Claims

Applicant traverses all of Examiner's rejections for the reason that Examiner failed to provide any sort of legally or professionally relevant evidence of non-patentability of the claimed invention.

Applicant bases his traversal on the following facts and analysis.

(a) According to Law, Applicant is entitled to a patent for his invention unless Examiner provides evidence of non-patentability.

(b) As evidence of non-patentability, Examiner presented certain prior art documents and an interpretation of the subject matter therein as it pertained to the claimed invention.

(c) Both the claimed invention and the prior art documents pertain to highly specialized subject matter, subject matter which a person without correspondingly special background/skill/expertise would be unable to properly comprehend and integrate.

For instance, a lay person would have no basis for understanding/appreciating the teachings represented by the claimed invention and/or the applied references.

(d) A prior art document pertaining to a highly specialized subject matter does not by itself constitute legally relevant evidence. For it possibly to constitute legally relevant evidence, such a prior art document must be combined with an appropriate interpretation; and this interpretation must be rendered by an individual possessing the particular competence required to render such interpretation. Moreover, for such interpretation to have any legal relevance, evidence must be provided to the effect of verifying the adequacy of the competence of the individual rendering the interpretation.

(e) Examiner has provided no evidence with respect to the qualifications of the individual who rendered the interpretation of the prior art documents upon which Examiner based his opinion of non-patentability. Consequently, Examiner has in fact not provided any evidence of non-patentability.

(f) Applicant has been informed by the PTO to the effect that the role of the examiner (as well as of the Board of Appeals) is to perform "an administrative and adjudicative" function, and that the particular professional qualifications of the examiner (or Examiner-in-Chief) are immaterial. The examiner can therefore not be expected to possess the above-indicated special background/skill/expertise. That is, he can not be expected to possess adequate competence to render a proper (i.e., informed) interpretation of the above-indicated highly specialized subject matter.

(g) An opinion (prima facie or not) with respect to a highly specialized subject matter rendered by an individual lacking the special background/skill/expertise associated with that subject matter, must be considered as an uninformed opinion.

(h) According to conventional rules of evidence, for an opinion (prima facie or not) to have legal relevance, it must constitute an informed opinion.

Hence, since Examiner failed to provide evidence with respect to the qualifications of the individual who provided the interpretation (of the contents of the prior art documents and their relationship with the claimed invention) upon which Examiner based his rejections, Examiner's rejections are invalid for lack of legally relevant evidence of non-patentability.

In re Proper Qualifications

In regard to what constitutes qualifications adequate to properly interpret and apply facts associated with the particular art pertinent to the claimed invention, Applicant contends that such qualifications are implicitly and appropriately defined by paragraph 103 of the Patent Laws.

In paragraph 103, with respect to the subject matter sought to be patented, express reference is made to "a person having ordinary skill in the art to which said subject matter pertains".

To Applicant, it is clear that the qualifications required to properly interpret the particular subject matter related to the claimed invention and the applied prior art references are exactly those of "a person having ordinary skill in the art to which said subject matter pertains".

In re "Line of Reasoning"

As a result of recent interactions with the Board or Appeals, Applicant has come to recognize a certain concept that both the Board and Applicant can agree upon as being reasonable. That certain concept might best be expressed as the requirement -- in case of a "103" obviousness rejection -- for Examiner to set forth a clear "line of reasoning" in support of his rejection; which "line of reasoning" must have its beginning in some primary reference and, on the basis of information provided by that primary reference, clearly lead to any secondary reference(s) and eventually to the claimed invention as it is expressly defined by the rejected claim.

As a basic component of this "line of reasoning" concept, Applicant quotes from In re Nilssen (CAFC 88-1139):

"The person of ordinary skill is presumed to have access to the entire art not because he unrealistically carries the entire art in his head but because he knows how to find information in the art by researching accessible sources".

Thus, a skilled artisan may not be presumed to carry the entire pertinent art in his head. Rather, from the primary reference he must be provided with plain and clear motivation to search for the type of teachings represented by any secondary references applied.

Hence, clearly, any motivation to apply the teachings of a secondary reference to those of a primary reference must come from the primary reference.

In re Applicant's Qualifications

Attached hereto as Exhibit A is an AFFIDAVIT wherein Applicant sets forth his own background/skill/expertise with respect to the particular art pertinent to the claimed invention. Applicant's statements in instant Reply Brief are based on the authority inherent in possessing this particular background/skill/expertise.

In re Merits of Specific Claims

Since Applicant has no evidence to the effect that he is dealing with an entity that is capable of properly understanding the claimed invention and all the facts/details/issues/values/preconceptions/practices/circumstances/etc. associated therewith, he is not going to respond in detail to all of Examiner's comments and opinions with regard to such facts/details/etc.

Rather, by way of a few typical examples of Examiner's comments, Applicant will point out what he considers to be fundamentally erroneous and/or inadequate reasoning.

(a) In supporting his "112" rejection of claims 1, 4-9, 12, 14-16 and 17-19, Examiner states on page 6 of his Answer:

"the frequency converter means is the main part of the appellant's invention".

That statement is erroneous.

There is no single element that "is the main part of the ... invention". Rather, the invention is the combination of the various elements identified in the claims: one element is not any more "main" than any other element.

Moreover, in claim 1 for example, Applicant recites a "voltage conditioning means"; which, as a skilled artisan would readily understand, is a term broad enough to comprise Applicant's frequency converter means: a frequency converter means merely being one form of a "voltage conditioning means".

Then, apparently still with reference to the frequency converter means, Examiner goes on to say that:

"in absence of this feature the claims 17-18 cannot be operative".

Examiner clearly does not properly understand claims 17-18 wherein is defined a:

"power track means ... having track conductors ... operative to provide a high-frequency voltage at these track conductors".

Clearly, the "power track means" as defined must inherently comprise some means of providing "high-frequency voltage at these track conductors". One way whereby this means could be comprised within the "power track means" would be by incorporating a battery and an inverter into this "power track means"; another way could be as expressly described by Applicant, namely an electric utility power line (providing a power line voltage) combined with a frequency converter means.

(b) Still on page 6 of his Answer, Examiner goes on to express an opinion to the effect that the claimed invention is merely an obvious application of Spira's teachings.

Examiner has not provided any evidence to the effect that this opinion is an informed opinion; without which evidence the opinion is without any legal relevance.

On the other hand, Applicant presented this particular issue to two persons who would have to be considered to possess appropriately relevant background/skill/expertise.

More particularly, Applicant asked these two individuals to carefully study Spira's patent and to identify each and every instance of what they would consider to constitute an obvious application of Spira's teachings.

The two individuals responded, and their responses are herewith included as part of this Reply Brief and attached hereto in the form of: i) Exhibit B, an AFFIDAVIT rendered by John Georgis, Jr. of South Euclid, Ohio 44121 ("Georgis"); and ii) Exhibit C, an AFFIDAVIT rendered by Dale E. Fiene of Addison, Illinois 60101 ("Fiene").

Clearly, neither of these individuals thought of Spira's teachings as being obviously applicable to and/or in a track lighting system. That is, neither of them considered it obvious to combine Spira's teachings with a track lighting system.

(c) Then, still on page 6 of his Answer, Examiner states that:

"Appellant's claimed invention is the circuit used to light the lamp".

That statement is erroneous.

Applicant's claimed invention is a track lighting system; which constitutes a combination of several elements.

(d) Still on page 6 of his Answer, with reference to Spira's circuit, Examiner states that:

"Spira et al does show this circuit to energize the same type of lamp. Whether this circuit is used in a track or not would not make any difference as far as invention is concerned".

This statement is irrelevant for the reason that it is based on the mis-perception on part of the Examiner that Applicant's invention is a "circuit to energize" a lamp.

However, that is not Applicant's invention.

Rather, Applicant's invention involves the combination of several elements, only one of which is possibly equatable to a "circuit to energize" a lamp.

Implicitly, Examiner's position is that applying Spira's teachings to a track lighting system is prima facie obvious.

But, a crucial question then is: prima facie obvious to whom?

To a lay person (such as Examiner must be presumed to be with respect to the particular art pertinent hereto)?

Or to a person in possession of the very special background/skill/expertise associated with the particular art pertinent hereto (such as Georgis, Fiene and/or Applicant)?

(e) In this connection and for the record, Applicant -- on basis of his particular background/skill/expertise as presented in attached Exhibit A -- herewith affirms that he considers it totally unobvious to apply the teachings of Spira to a track lighting system.

Very plainly, Spira does not in any way suggest a benefit or desirability associated with applying his teachings to a track lighting system.

What obvious desirability would Examiner see resulting from applying Spira's teachings to a track lighting system, such as that of Neumann?

In this connection, Applicant quotes:

"In determining the patentability of an invention it should be realized that the fact that the prior art could be modified so as to result in the combination defined by the claims at bar would not have made the modification obvious unless the prior art suggests the desirability of the modification". (See In re Deminski, 796 F.2d 436, 230 USPQ 313 -- Fed. Cir. 1986.)

(f) Still on page 6 of his Answer, Examiner states that:

"Spira et al does teach using his lamps for different application which the examiner considers track lighting to be conventional application".

On what authority does Examiner base his opinion to the effect that track lighting would be a conventional application for Spira's teachings?

Based on his own authority as a person possessing the particular background/skill/expertise associated with the art pertinent hereto, Applicant firmly asserts that track lighting would constitute a highly unusual application for Spira's teachings.

What would make it desirable to apply Spira's teachings to a track lighting system?

Where is such desirability suggested?

The fact of the matter is that there are clear and very strong reasons for not applying Spira's teachings to a track lighting system. One of these reasons is that there is considerable cost-, size-, weight-, and efficiency-penalties associated with using a frequency converter such as Spira's to power a track lighting system such as that of Neumann; yet, what possible benefit would result from using Spira's frequency converter with Neumann's track lighting system? --- Why not very simply power the track conductors in Neumann's track lighting system with plain old ordinary 120Volt/60Hz power line voltage?

(g) At the top of page 7 of his Answer, Examiner states "it was considered obvious ... to use the Neumann track power distribution means in lieu of the Spira et al transmission line distribution means 36".

On what authority does Examiner base this opinion?

Based on his own authority, as verified in Exhibit A hereto, Applicant herewith asserts that, to a person who would possess but ordinary skill in the pertinent art, it would be highly unobvious to use Neumann's "track power distribution means in lieu of the Spira ... transmission line".

One reason that this would be unobvious is that (see his column 5, lines 23-27) Spira's transmission line 36 constitutes "the novel transmission line of the invention for distribution of high frequency high power energy, as contrasted to well known arrangement for the distribution of high frequency low power ... voltages".

So, particularly since Spira makes a point of describing the desirability of using an unusual type of transmission line for distribution of his high frequency power, what makes Examiner see a suggestion to the effect that it would be obvious to use Neumann's "track power distribution means" in lieu of Spira's expressly enunciated and clearly unusual "novel transmission line"?

CONCLUDING COMMENTS

The above-presented comments are but a few of numerous comments Applicant could present in rebuttal of Examiner's various statements of opinions in his Answer; which opinions, Applicant (on basis of his particular background/skill/expertise as set forth by attached Exhibit A) must classify as utterly uninformed opinions.

It appears to Applicant that Examiner is in effect attempting to shift the initial burden of proof away from Examiner and onto the shoulders of Applicant: wanting Applicant to prove non-obviousness, rather than for Examiner to prove obviousness. However, to prove a negative is normally a very laborious task compared with proving a positive; which means that, in order to save a relatively small amount of burden on his part, Examiner places a major burden upon Applicant.

In view of 35 USC 102/103, Applicant clearly is entitled to a patent for his invention unless Examiner can show -- based on *prima facie* evidence -- that the invention is unpatentable. Thus, the initial burden of proof belongs to Examiner. And, in view of comments on pages 2-3 hereof, it is clear that Examiner has not provided such *prima facie* evidence of non-obviousness.

In support of his position of non-patentability, Examiner has submitted several documents combined with an interpretation of their teachings as pertinent to the claimed invention. However, Examiner has not provided evidence to the effect of showing that this interpretation was rendered by a person possessing the competence required to properly render such interpretation.

On the basis of his own particular background/skill/expertise as related to the subject matter of the claimed invention (see Exhibit A), Applicant herewith testifies to the effect that the person having rendered the interpretation of the claimed invention, as well as of the prior art documents upon which the claimed invention was found unpatentable, manifestly demonstrates (by way of that very interpretation) that he lacks an adequate level of understanding of the related subject matter: his level of understanding being so limited as to make any opinions based thereupon totally without legal or professional relevance.

As a bottom line conclusion: since Examiner did not provide any evidence whatsoever with respect to the competence of whomever interpreted the prior art documents upon which Examiner based his opinion of unpatentability, Examiner did in fact not provide any evidence of unpatentability.

Clearly, the applied prior art documents by themselves do not constitute such evidence.



Ole K. Nilssen, Pro Se Applicant

Date: 8-25-88

312-658-5615

Exhibit A

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

AFFIDAVIT

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Commissioner:

I, Ole K. Nilssen, herewith affirm as follows.

(A) I was born on June 6, 1928. I am a citizen of Norway, but I have been a permanent resident of the U.S. since 1955.

(B) I presently live at Caesar Drive, Barrington Hills, Illinois 60010.

(C) In June 1952 I received a Bachelor's Degree in Electrical Engineering from University of Wisconsin, Madison, Wisconsin; and

in August 1953 I received a Master Degree in Electrical Engineering from University of Wisconsin, Madison, Wisconsin.

(D) I have practiced Electrical and Electronics Engineering in various capacities since August 1953, as follows.

1. From August 1953 until July 1956, I was employed by RCA Inc. as an Electronics Engineer.

Most of the time at RCA, as a member of the TV Advanced Development Group, I was responsible for various design and development projects related to color TV. At RCA, I gained substantial experience in the areas of magnetics, high frequency circuits, IF circuits, TV tuners, tuned circuits, antennas, and frequency control. At the time I left, I was a Project Engineer responsible for design and development projects involving high frequency circuits in Color TV receivers.

At RCA, I made numerous inventions, seven of which resulted in U.S. patents. These inventions related to magnetics, logic circuits, TV circuits, frequency control, etc.

2. From September 1956 until July 1967, I was employed by Ford Motor Company in various senior engineering and engineering management capacities.

For the first several years at Ford, I worked in Ford's Scientific Laboratory, initially as a Senior Electronics Engineer, subsequently as a Principal Staff Engineer.

At the Scientific Laboratory, I initially had responsibility for a major project related to an automotive obstacle detection system involving X and K Band radar. In connection with this project, which involved the direct supervision of one junior electronics engineer and one technician, I gained substantial experience in the field of CW radar in addition to inverter-type power supplies. The project resulted in several published papers and several issued U.S. patents, in addition to an extensive internal technical report.

Subsequently at the Scientific Laboratory, I initiated and managed a project related to electric propulsion for automobiles. This project resulted in several internal technical reports and recommendations; which reports and recommendations subsequently resulted in the approval and formation of a major project aimed at the actual development of a prototype hybrid-electric car.

Later, I joined Ford's Applied Research Office (an off-shoot of the Scientific Laboratory) as manager of a group of electronics engineers and with responsibility for developing electrical and electronics devices and systems for application to automobiles and automotive transportation.

In that capacity, some of the projects for which I had direct responsibility were: Electronic Ignition System; Electric Quick Heat System; Advanced Car Radio Concepts; a Hybrid-Electric Automotive Propulsion Package.

At the time I left Ford, I was manager of its Electronic Systems Group and had a staff of 12 electronics and electrical engineers under my supervision.

While at Ford: i) I made numerous inventions of which over 20 resulted in U.S. patents; ii) I wrote a number of internal technical reports; iii) I published a number of technical papers in various technical journals; iv) I made numerous technical presentations, both internally and in connection with various professional conferences; and v) I initiated and succeeded in forming a Professional Group on Vehicular Technology within the Institute of Electronics and Electrical Engineers.

3. From August 1967 until March 1972, I was employed by Motorola Inc., initially as Director of R&D for its Automotive Products Division (one of Motorola's five Divisions), subsequently as Director of Motorola's New Ventures Development Laboratory.

As Director of R&D, with a staff of 35 engineers and technicians, I had direct responsibility for conceiving, designing and developing new products suitable for Motorola's Automotive Products Division.

As Director of Motorola's New Ventures Development Laboratory, I reported to Motorola's Chief Executive Officer and had direct responsibility for developing new divisions for Motorola.

While at Motorola: i) I supervised numerous electronics and electrical engineers involved in various projects related to fields such as Electronic Automotive Ignition, Automotive Radios and Tape Players, Automotive Alternators and Voltage Regulators, Inverter-type Power Supplies, Electric Propulsion for Automobiles, Electric Quick Heating and Air Conditioning for Automobiles; ii) I made numerous inventions, of which six resulted in U.S. Patents; iii) I gave numerous presentations, both internally and in connection with various professional gatherings; iv) I edited and approved numerous internal technical reports; and v) I developed jointly with Motorola's Board Chairman a plan for effectively developing new high-technology business activities for Motorola.

4. From September 1972 until July 1974, I was employed by Tenna Corp. of Cleveland, Ohio, as its Chief Technical Officer. At the time, Tenna was a business with \$60 million in annual revenues and principally engaged in the manufacturing and marketing of various Electronic and Electrical Automotive OEM and After-market Products, such as DC Motors, Electrically Operated Car Antennas, Car Radios and Tape Players, Speakers.

I had full responsibility for all of Tenna's Product Engineering and Development activities; which responsibility involved the supervision of about 20 engineers and technicians.

5. Since July 1974 I have been in business for myself; which business involves the development, protection and marketing of intellectual properties principally related to Electronic Power Processing (TM*) in general and Electronic Lighting (TM*) in particular.

(*The terms Electronic Power Processing and Electronic Lighting are trademarks of Ole K. Nilssen.)

This activity has resulted in numerous profitable licensing relationships as well as in the generation of more than 50 issued and 125 pending U.S. patents, most of which are related to electronics as applied to lighting.

Since 1974 I have been directly responsible for numerous technical projects resulting in the development of several new electronic products used for various lighting purposes, several of which products are presently being manufactured and marketed by various licensees of mine.

In particular and by way of example: i) in 1974 I started the development of an electronic high-frequency ballast for fluorescent lamps, which ballast I licensed to Fyrnetics Inc. of Elgin, IL, in 1978; ii) in 1979 I developed an electronic transformer product for low voltage (12 Volt) incandescent lamps (such as the MR-14 Halogen lamps used in track lighting); subsequently I demonstrated this product to Halo Lighting of Elk Grove, IL, and eventually (in 1981) I licensed Fyrnetics to manufacture and market this product; iii) by 1982 I had developed a major new concept of power-limited lighting for suspended ceiling systems; which invention I licensed to Armstrong World Industries of Lancaster, PA, in 1982; and iv) by 1983 I had developed a design for a microwave oven power supply and in 1984 I licensed that design to Ensign Corp. of Burr Ridge, IL; and v) by 1985 I had developed a fully electronic automotive battery charger; which charger I licensed to Schauer Manufacturing Corporation of Cincinnati, Ohio, in 1986.

With each licensee, I have been directly and heavily involved with assisting its engineers with respect to details of specific products design and development, particularly as related to attaining U.L. Listings and FCC certifications. Moreover, in connection with my development and licensing activities, I have had innumerable occasions to interact in depth with various design engineers and technical management personnel of every major U.S. manufacturer of lighting products: G.E., Sylvania, Philips, Lithonia, the Genlyte Group (includes Lightolier and Keene Lighting), U.S. Lighting (includes Prescolite, which is a licensee of mine), Advance Transformer, Universal Manufacturing Co., Thomas Industries (includes Capri Lighting), Daybright Division of Emerson Electric, Halo Lighting Division of Cooper Industries, etc.

Since 1982, in connection with my invention, licensing and patenting activities, I have personally prosecuted more than 200 patent application at the U.S. Patent and Trademark Office. In the process, I have had to deal with numerous different patent examiners in several different examining groups.

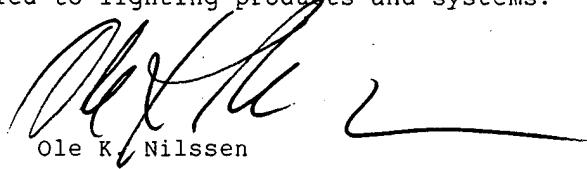
(E) In total, I have spent more than 30 years in the engineering, design, development, specification, construction, testing, evaluation, teaching, patenting and management of and/or related-to projects involving electronic power supplies in general and electronic inverter-type power supplies in particular; and I have accumulated corresponding experience in the art of power supplies, particularly electronic inverter-type power supplies and ballasts, as applied to various lighting products and systems, particularly to fluorescent lamps and lighting products.

Moreover, particularly in my positions at Ford, Motorola and Tenna Corp., I had the responsibility for attracting, evaluating and hiring a substantial number (approximately 100) of professional-level technical talents, particularly electronics engineers with advanced degrees from accredited colleges. Also, I had the responsibility of continuously evaluating the performance of these talents as well as to aid in their professional development.

Additionally, during my many years of activity in the field of electronics as applied to lighting, I have on numerous occasions interacted in depth with ordinary practitioners of the art of lighting products.

Consequently, I herewith affirm that I possess at least ordinary skill in the art of electronic inverter-type power supplies as applied to lighting products and systems, and particularly in the art of electronic inverter-type ballasts for gas discharge lamps.

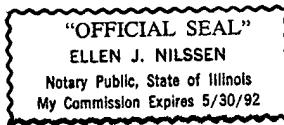
Moreover, I herewith affirm that I am an expert in the area of electronics as applied to lighting products and systems.


Ole K. Nilssen

STATE OF ILLINOIS)

) ss

COUNTY OF COOK)



SEAL

Sworn to and subscribed before me this 15th day of

August, 1988.

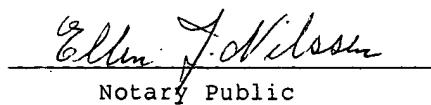

Ellen J. Nilssen
Notary Public

Exhibit B

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

AFFIDAVIT

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Commissioner:

I, John Giorgis, Jr., herewith affirm as follows.

(A) I was born on May 15, 1925; and I am a U.S. Citizen.

(B) I presently live at 1047 Piermont Road, South Euclid, Ohio 44121.

(C) In 1950 I received a B.E.E. Degree in Electrical Engineering from Catholic University of America, Washington, D.C.;

In 1956 I received an MSE Degree in Electrical Engineering from Union College and University, Schenectady, N.Y.; and

In 1962 I received my Professional Engineering License from the State of New York.

(D) I have practiced Electrical and Electronics Engineering since 1950, as follows.

1. Between September 1950 and September 1951 I was on the General Electric Company (G.E.) engineering training program with assignments in magnetic amplifiers, jet engine instrumentation, and power transformers.

2. Between September 1951 and October 1959 I was with G.E.'s Aeronautical and Ordnance Systems Division where I was responsible for the hardware design of the magnetic amplifier reactor control system of the atomic submarine Sea Wolf. I also did transistor control and circuit design for military systems.

3. Between October 1959 and February 1968 I was an Applications Engineer with G.E.'s Semiconductor Products Department, specializing in semiconductor applications for the military and industrial markets.

In addition, I designed a number of thick film and monolithic integrated circuits for these markets. I was co-author of the sixth and seventh editions of the G.E. Transistor Manual and of the Tunnel Diode Manual.

4. Between February 1968 and October 1976 I was a Consulting Engineer at G.E.'s Heavy Military Electronic Systems Department, where I was responsible for the Independent Research and Development Microelectronics Programs. These programs included thick film material and process studies, the design and application of custom thick film and monolithic integrated circuits.

5. Between October 1976 and April 1988 (when I retired) I was a Consulting Engineer and Technical Manager at G.E.'s Lighting Business Group in Cleveland, Ohio, designing and evaluating electronic high frequency ballasts for fluorescent and metal halide lamps.

I am the holder of three patents on inverter configurations for fluorescent lamps.

In addition, I performed research and development on the high frequency starting and running requirements of fluorescent lamps.

(E) In total, I have spent more than 10 years in the design, development, construction, testing and evaluation of electronic power supplies in general and electronic inverter-type power supplies in particular, and I have accumulated substantial experience in the art of power supplies, particularly electronic inverter-type power supplies and electronic inverter-type ballasts for fluorescent lamps.

Consequently, I believe I have at least ordinary skill in the art of electronic inverter-type power supplies, particularly as used in connection with lighting systems and products.

(F) I have been informed to the effect that:

(1) the Commissioner rejected certain claims in an application for a patent for the reason that the Commissioner held the claimed invention to be obvious over prior art;

(2) as evidence of obviousness, the Commissioner cited the following prior art reference, a copy of which has been received by me:

U.S. Patent No. 4,207,498 to Spira et al.;

(3) the Commissioner held that the cited Spira patent, when considered in combination other well known art in the field of lighting, rendered the claimed invention obvious;

(4) more particularly, the Commissioner held that by making an obvious application of the teachings of Spira, the claimed invention would result; and

(5) in other words, the Commissioner held that the claimed invention merely constitutes an obvious application of Spira's teachings.

(G) I have not seen the application for patent identified in section (F) above, nor have I seen the claims thereof. More particularly, I have not received a description of the claimed invention.

(H) I have been requested:

(1) to carefully study and consider the cited reference in light of the situation described in section (F) above;

(2) to identify each and every instance of what I see as an obvious application of Spira's teachings;

(3) to express in writing each one of those obvious applications.

(I) I have performed the study and consideration requested of me in section (H) above, having spent therefor an amount of time that I judged to be reasonable; and I herewith set forth in writing each and every one of those obvious applications, as follows:

(1) Dimming of high frequency ballasts utilizing pulse width or phase shift modulation;

(2) Design of an active or passive network between a high frequency inverter and discharge lamps to provide unity power factor;

(3) Utilization of a high frequency, high power cable for distributed loads designed to minimize the lead-to-lead and lead-to-conduit capacitance and to minimize the inductive coupling between the leads and the conduit;

(4) Maintaining relatively constant voltage across the lamp electrodes by utilizing a transformer whose primary is across the lamps;

(5) 60 Hz line power factor correction utilizing an inductor in series with the line and a capacitor across the AC terminals of the full wave rectifier;

(6) A dimming central inverter where regulation against 60 Hz line voltage variation is added to the control; and

(7) A system as described by Spira except a different 60 Hz power factor correction scheme is used.

John Giorgis Jr
John Giorgis, Jr.

STATE OF OHIO)
) ss
COUNTY OF Cuyahoga)

Sworn to and subscribed before me this 3rd day of
August, 1988.

Charles A. Saporito
Notary Public

CHARLES A. Saporito, Notary Public
State of Ohio
My commission expires June 21, 1992
Recessed in Cuyahoga County

Exhibit C

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

AFFIDAVIT

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Commissioner:

I, Dale E. Fiene, herewith affirm as follows.

(A) I was born on April 24, 1945; and I am a U.S. Citizen.

(B) I presently live at 337 North Chestnut, Addison,
Illinois 60101.

(C) In June 1967 I graduated, with honors, with a Bachelor
of Science Degree in Electrical Engineering from Valparaiso
University in Valparaiso, Indiana.

(D) I am a member of Tau Beta Pi, an Engineering honors
society.

(E) I have practiced Electrical and Electronics Engineering
since June 1967, as follows.

1. Between June 1967 and February 1970, at Honeywell
Inc., as an Associate Systems Analyst Engineer, I developed
analog and digital computer simulations of automatic control
systems to predict performance and improve stability.

2. Between February 1970 and May 1978, at Honeywell
Inc., as a Design Engineer and Project Manager, I was responsible
for the design and development of fire and security alarm
systems.

3. Between May 1978 and June 1982, at Fyrnetics Inc. of
Elgin, Illinois, as Electrical Engineering Manager, I was
responsible for the design and development of fire alarms, home
security products and electronic lighting products.

4. Between June 1982 and April 1987, at Fyrnetics Inc., as Director of Engineering, I directed the activities of a group that designed and developed a complete line of electronic fluorescent lamp ballasts as well as other electronic lighting-related power supplies such as inverter-type power supplies for track lighting applications.

5. Since April 1987, at Seatt Corporation of Downers Grove, Illinois, I have been managing the development of fire alarms, electronic setback thermostats and electronic lighting products.

(F) In total, I have spent more than 9 years in the design and evaluation of electronic lighting products in general and of inverter-type power supplies for Halogen Lamps as well as inverter-type fluorescent lamp ballasts in particular.

(G) I have been informed to the effect that:

(1) the Commissioner rejected certain claims in an application for a patent for the reason that the Commissioner held the claimed invention to be obvious over prior art;

(2) as evidence of obviousness, the Commissioner cited the following prior art reference, a copy of which has been received by me:

U.S. Patent No. 4,207,498 to Spira et al.
hereinafter referred-to as the "Spira patent" and "Spira";

(3) the Commissioner held that the Spira patent, when considered in view of other well known art in the field of lighting, rendered the claimed invention obvious; and

(4) more particularly, the Commissioner held that the claimed invention constituted nothing more than an obvious application of Spira's teachings.

(H) I have not seen the application for patent identified in section (G) above, nor have I seen the claims thereof. More particularly, I have not received a description of the claimed invention.

(I) I have been requested to:

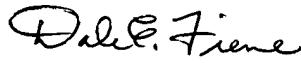
(1) carefully study and consider the Spira patent in light of the situation described in section (G) above;

(2) identify each and every instance of what I see as an obvious application and/or improvement of Spira's teachings;

(3) express in writing each one of those obvious applications and/or improvements.

(J) I have performed the study and consideration requested of me in section (I) above, having spent therefor an amount of time that I judged to be reasonable; and I herewith set forth in writing each and every one of those obvious applications and/or improvements, as follows.

I did not find any obvious applications and/or improvements with respect to Spira's teachings over and beyond what is already expressly identified in Spira's patent.

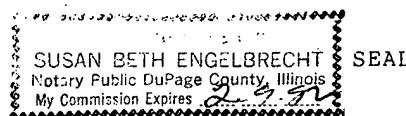


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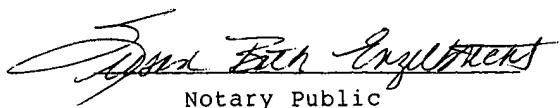
STATE OF ILLINOIS)

) ss

COUNTY OF DUPAGE)



Sworn to and subscribed before me this 26th day of
August, 1988.



Susan Beth Engelbrecht
Notary Public